8,000MWs of tidal power in the Severn? Finding the energy/cost/environment/economic balance.

C.J.A. BINNIE, Severn Tidal Power Feasibility Study, Minehead, UK P.M. KYDD, Parsons Brinckerhoff, Bristol, UK

SYNOPSIS. Reducing carbon dioxide emissions to 80% of the 1990 levels by 2050 is a priority for the UK and is likely to require most, if not all, feasible low carbon technologies to achieve this. Following on from the conclusions of the Sustainable Development Commissionⁱ (SDC) that "there is a strong case to be made for a sustainable Severn barrage", the Government launched a feasibility studyⁱⁱ in January 2008 to assess whether it could support a tidal power scheme in the Severn estuary, and if so, on what terms. Several options exist for development of tidal power from the Severn including the previously studied barrage proposed between Cardiff and Weston-super-Mare. These options have the potential to generate up to 5% of the UK's electricity demand and the largest proposal would save over 7 million tonnes of carbon dioxide per year.